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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/276,455	03/25/1999	ALAN ROY FERSHT	674508-2001	2127
20999	7590	04/27/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			ZEMAN, ROBERT A	
			ART UNIT	PAPER NUMBER
			1645	

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/276,455

Applicant(s)

FERSHT ET AL.

Examiner

Robert A. Zeman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9-21,29-31,55 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9-21,29-31,55 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Prosecution Application

The request filed on 7-12-2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/276,455 is acceptable and a CPA has been established. An action on the CPA follows.

Claims 1, 9-21, 29-31 and 55-56 are pending and currently under examination.

Claim Rejections Maintained and New Grounds of Rejection

35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 9-21, 29-31 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braig et al. in view of Holland et al. for the reasons set forth in the Previous Office action in the rejection of claims 1, 9-21 and 29-31.

Applicants argue:

1. Braig et al. does not teach “fragments of GroEL” that have chaperone activity.
2. One would not have been motivated to make a recombinant *E. coli* GroEL fusion polypeptide.
3. Braig et al. do not disclose a sequence for GroEL wherein amino acid residue 262 is not an alanine and amino acid residue is not isoleucine.

Applicant’s arguments have been fully considered and deemed non-persuasive.

The instant claims are drawn to GroEL polypeptides.

As stated previously, Braig et al. disclose the entire amino acid sequence of *E. coli* GroEL (including fragments). Braig et al. further teach that chaperones are large multisubunit assemblies essential in mediating ATP-dependent polypeptide chain folding. Braig et al. does not teach a recombinant *E. coli* GroEL fusion polypeptide. However, as noted by Applicant in his response, Holland et al. teach a process of making **secreted** recombinant fusion polypeptides including polypeptides of bacterial origin.

Given that Braig et al. disclose the entire sequence of *E. coli* GroEL and that Holland et al. disclose a process of making a recombinant fusion polypeptide it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to identify the fragments of GroEL that have chaperone activity for use as a diagnostic tool. Moreover, one would have been motivated to utilize the method of Holland et al. to produce said fragments

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since the fusion proteins of Holland et al. are secreted into the culture medium thereby providing an efficient method for producing the GroEL polypeptides. One would have had a high degree of success since Holland et al. disclose that their method can be used for the production of a myriad of polypeptides including those of bacterial origin (see column 4, lines 10-12).

With regard to Point 3, the instant claims are not limited to polypeptides with restrictions on residues 262 and 267.

Claims 1, 9-21, 29-31 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labigne et al. (WO 94/26901).

The instant claims are drawn to GroEL fragments with refolding activity, fusion proteins containing said fragments and compositions containing said fragments.

Labigne et al. disclose the complete sequence for Hsp B (see Figure 7A). Said sequence is the same as SEQ ID NO:10. Labigne et al. further disclose fragments and fusion proteins of said proteins (see abstract and page 4). Labigne further disclose the use of chaperonins in immunogenic compositions (see page 4). Labigne et al. does not explicitly disclose the residues of the various fragment. However, in the absence of evidence to the contrary, the fragments of the instant invention are deemed to be encompassed by the fragments disclosed by Labigne et al. since it would have been obvious to utilize only the biologically active fragments in therapeutic compositions and/or kits.

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Conclusion

No claim is allowed.

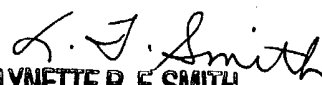
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Zeman whose telephone number is (571) 272-0866.

The examiner can normally be reached on Monday- Thursday, 7am -5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on (571) 272-0864. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert A. Zeman
April 22, 2004


LYNETTE R. F. SMITH
SUPERVISORY PATENT EXAMINER
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